

Date: February 12, 2022
From: TAC Lower Washington Street Working Group
To: TAC
Subject: Options for Lower Washington Street

A TAC working group has studied conditions and developed suggestions for improvements on the segment of lower Washington Street between Brattle Terrace and Summer Streets, in response to a letter transmitted to the Select Board from a resident of the street expressing concerns about the “conditions and safety of the portion of the road adjacent to the bike path/opening to Brattle Street.”

Lower Washington Street is a private way, raising the question of whether involvement by the Transportation Advisory Committee (TAC) is appropriate, given that the Town of Arlington is prohibited by statute from funding most physical roadway improvements to private ways. While the Town doesn’t have responsibility for roadway maintenance, it does have authority relating to access to the street, such that residents of the street may require the Town’s permission to implement changes affecting roadway access. Moreover, the Town has an interest in the segment of the roadway under study because it provides access to the Minuteman Bikeway. The TAC, therefore, has studied traffic concerns on lower Washington Street, in response to a request by the Select Board.

Given that the road is a private way, these are suggestions, rather than formal recommendations. They are not a substitute for engineering design services, but advice to the Select Board on what kind of designs the Board may find acceptable. Ultimately, the owners of any private way should consult with an engineer for design documents to make improvements.

Summary of Suggestions

As a result of this analysis, the working group offers two potential options for further consideration by the Town.

1. Retaining the present vehicle traffic flow, with southbound vehicles yielding to oncoming traffic where the roadway curves at approximately 32 -34 Washington Street, in conjunction with improved signage; or
2. Changing the traffic flow on the segment of the street between approximately 32 Washington and Brattle Streets to one-way northbound for motor vehicles, while allowing two-way traffic for bicycles.¹

The working group also has developed a signage plan corresponding to both options, as follows.

Signage

Option 1:

- Sign in front of 32 Washington (at the curve): Yield (R1-2) with an Oncoming Traffic plaque (R1-2aP)



¹ The traffic flow in Option 2 would be established via a short contra-flow bike lane, for which several examples exist in eastern Massachusetts (e.g., Bay State Road in Kenmore Square; Main and Third Street, Cambridge)

Option 2:

- Sign at Washington and Summer: **No Outlet** (W14-2), with an **Except Bike** plaque:



W14-2

- **No Outlet** sign where road narrows at about 46-50 Washington Street

At 32 Washington St.: a. **No Motor Vehicles** (R5-3) or b. **Do Not Enter** (R5-1) with an **Except Bikes** plaque.



R5-3



R5-1

- A *Pavement marking* to delineate the 1-way travel lane and contraflow² bike lane would reinforce the one-way motor vehicle travel restriction. The marking would be in the form of a 20-foot yellow line (illustrated below), located 3-4 feet from the southwest edge of the roadway (closer to the bike path) and 10 – 13 feet from the northeast edge of the roadway, from the curve in the road towards the bike path entrance. It would establish a bike lane going down the hill (to the bike path access), and a general purpose traffic lane going up the hill. Road width varies between 13 and 17 feet in that area.



Existing Conditions and Problem Analysis

The working group observed and analyzed conditions on the segment of Washington Street between Brattle Street and Summer Street. The working group concluded that the primary problems are that this is a narrow, 2-way street with potholed pavement, particularly between Brattle Street and 32-34 Washington Street, where the road necks down at a sharp curve with limited visibility. The section of the roadway where the curve is located is passable only by one vehicle, such that any vehicle attempting to pass through the curve in the opposite direction must back up.

² See section 5.3.2.1 of the 2006 Massachusetts Highway Department Project Development and Design Guide



The southerly endpoint of the curve is adjacent to an entrance to the Minuteman Bikeway, resulting in a safety risk for cyclists and pedestrians, due to traffic backing up. Several participants at a recent public meeting of the Minuteman Bikeway Planning Project brought up the need to improve access to the bikeway from lower Washington Street.

There is a small area adjacent to the southbound travel direction just to the south of the curve that appears to be available as a pull-out for a vehicle facing an oncoming vehicle at the curve.



Currently, the pavement is in such poor condition that the working group considers it unlikely that speed is a serious concern, although vehicle conflicts at the curve and vehicles backing up close to residences present a safety problem.



Private Way Considerations

The segment of lower Washington Street under study is a private way (a *statutory* right of way under law). Based on the working group's understanding of a memorandum by the Town's legal department of July 13, 2018, *Maintenance and Repairs of Private Ways*, it appears that Town approval is likely to be needed for several of the potential options we have identified to address the constrained right of way and safety issues we have observed. As per the legal memorandum: "*statutory private way abutters [have] no power to close, alter, widen, or control it; and [have] no right in it, except in common with all others who have occasion to pass over it.*" *The public's right of access to such a way is the same as if it were a public way that had been accepted by the Town.*³

POTENTIAL ACTIONS

- A. Signage:** Signs would be posted to direct southbound vehicles to yield to oncoming traffic where the roadway curves at approximately 32-34 Washington Street.

Advantages:

- Street abutters probably can implement without need for Town approval.
- No changes are required in service and emergency vehicle routes.
- Less expensive than options that entail significant roadway improvements.

³ Heim, Douglas W., Town Counsel, *Maintenance and Repairs of Public Ways*, July 13, 2018, p.6.

Disadvantages:

- Potential improvement in traffic conditions and safety is likely to be modest.

B. **Changing the street segment to one-way operations:** There are a number of possible variations of this option as concerns the direction of one-way traffic and the endpoints of the one-way segment of roadway, as follows:

- Direction: 1-way northbound
- Direction: 1-way southbound
- Coverage: Entire roadway between Summer and Brattle Streets
- Coverage: 1-way only in the segment of the roadway between the curve (approximately 32 –34 Washington Street) and Brattle Street; the 1-way segment also could be confined only to the segment of roadway between the bikeway and the first driveway along Washington Street going towards Summer Street.

Retaining 2-way operation for bicycles is essential for all the sub-options. (There is a substantial volume of bicycle traffic connecting to/from the Minuteman Bikeway on this street.)

Regarding the direction of 1-way traffic: northbound – from Brattle Street to Summer Street - has several advantages over the southbound direction. Eliminating the left turn from Washington Street to Brattle Street is likely to improve safety and alleviate a troublesome traffic conflict. There currently is no control (e.g. stop sign) at the Washington Street approach to Brattle Street. Also, trash trucks, school buses, and fire trucks responding to a fire travel uphill, in the northbound direction, on Washington Street.

Advantages:

- Eliminates traffic conflicts throughout lower Washington Street, improving safety for all modes.
- Preserves emergency and service vehicle access, especially if emergency vehicles can continue to use the street in both directions as needed. Improved traffic conditions on lower Washington Street would benefit emergency and service deliveries, as well as private vehicles, bicyclists, walkers, and residents.
- Eliminates the exit from Washington Street to Brattle Street, which may improve safety and traffic flow on Brattle Street. The sight distance for traffic turning from Washington Street onto Brattle Street and for northbound traffic turning from Brattle Street to Washington Street is constrained under existing conditions. Eliminating these turns also may help to reduce traffic conflicts generally in the constrained segment of right of way approaching the Bikeway bridge over Brattle Street.

Disadvantages:

- May require change and additional time and distance in service vehicle routing.

- More circuitous access to/from lower Washington Street would be required for residents if the entire street between Brattle and Summer Streets is 1-way. Therefore, the preferred sub-option would limit 1-way operation to just the segment of the roadway from the curve to Brattle Street, or some segment thereof.
- Traffic may increase on lower Washington Street if existing vehicle conflicts are eliminated, therefore improving traffic flow, if the entirety of lower Washington Street is 1-way. This impact would be greater if pavement conditions are improved on lower Washington Street.
- Special arrangement is needed to allow continuation of 2-way bicycle traffic.

The working group did a preliminary assessment of the extent to which additional traffic could be expected to divert to lower Washington Street with 1-way northbound traffic flow *over the entire length of the street between Brattle and Summer Streets*, if pavement condition on lower Washington Street is improved substantially. Considering recent traffic data for the Symmes/Brattle/Summer Street intersection, it appears reasonable to expect that there would be in fact a substantial increase in traffic on lower Washington if the conflicts at the curve on lower Washington are eliminated and pavement conditions are improved. Therefore, the working group finds that it would be desirable to limit 1-way traffic flow to only the segment of lower Washington Street between the curve and Brattle Street, rather than on the entire length of the roadway between Brattle and Summer Street.

- C. **Closing off the segment of the street between the curve and Brattle Street**, except for emergency vehicles, bicycles and pedestrians. The working group initially considered this third option. Preliminary evaluation by the Arlington Fire Department indicated that this option would not be acceptable and the working group, therefore, dropped it from further consideration.

Conclusions and Next Steps

The working group offers both of the options identified at the beginning of this memorandum for further consideration by Town officials and relevant departments: 1) retaining existing traffic flow on lower Washington Street but improving signage at the curve near 32-34 Washington Street; or 2) implementing 1-way northbound traffic flow on the segment of the roadway between the curve on lower Washington Street and Brattle Street (or between the curve and the Bikeway entrance). While another possibility would be to designate the entire roadway between Brattle and Summer Streets as 1-way, this action would prevent residents from getting access to their homes directly from Summer Street, posing a major inconvenience to them and also requiring that the roadway segment between the curve and Brattle Street be paved, to provide the residents with reasonable access. Therefore, the working group views the most viable version of the 1-way traffic flow option to be its application only to the segment of lower Washington Street between the curve and Brattle Street.

A potential improvement strategy would be to implement Option 1 first and then to proceed with Option 2 if improved signage proves to be inadequate to solve the problem. The choice of options depends on the preferences of abutters to lower Washington Street and possible policy considerations by the Town.

An important issue applying to both options is whether the Town can pay for new signage, given that the roadway segment under consideration is a private way south of Brattle Terrace,⁴ but that some of the signs suggested for Option 2 are on the part of Washington Street that is public way. The DPW's *Betterment* process⁵ can provide the means by which the Town can participate in implementing physical improvements in support of the selected option, with payment by the abutters.

⁴ The Town is prevented from funding physical improvements to the roadway because the segment of lower Washington Street between Brattle Terrace and Brattle Street is a statutory private way.

⁵ *Private Way Repair/Betterment Order Procedure*, Arlington Department of Public Works, November 2, 2015